

## **Shearing and Forming in Manufacturing**

When dealing with sheet metal, shearing comes into play. Shearing uses cutting blades to make straight cuts into a piece of metal. Also known as die cutting, you'll often see shearing used on aluminum, brass, bronze and stainless steel. Another metal-shaping process is forming, which uses compression or another type of stress to move materials into a desired shape. Although forming is often used with metal, it also can be used on other materials, including plastic.

Forming is a mechanical process used in manufacturing industries wherein materials (mostly metals) undergo plastic deformations and acquire required shapes and sizes by application of suitable stresses such as , shear and tension.

## **Joining in Manufacturing**

You can only get so far with molds and machines. At some point you need to be able to put multiple parts together to make one piece. Otherwise, just about all you can create is IKEA-like furniture that needs to be assembled, part by part. Joining uses processes like welding and soldering to apply heat to combine materials. Pieces can also be joined using adhesive bonding or fasteners

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